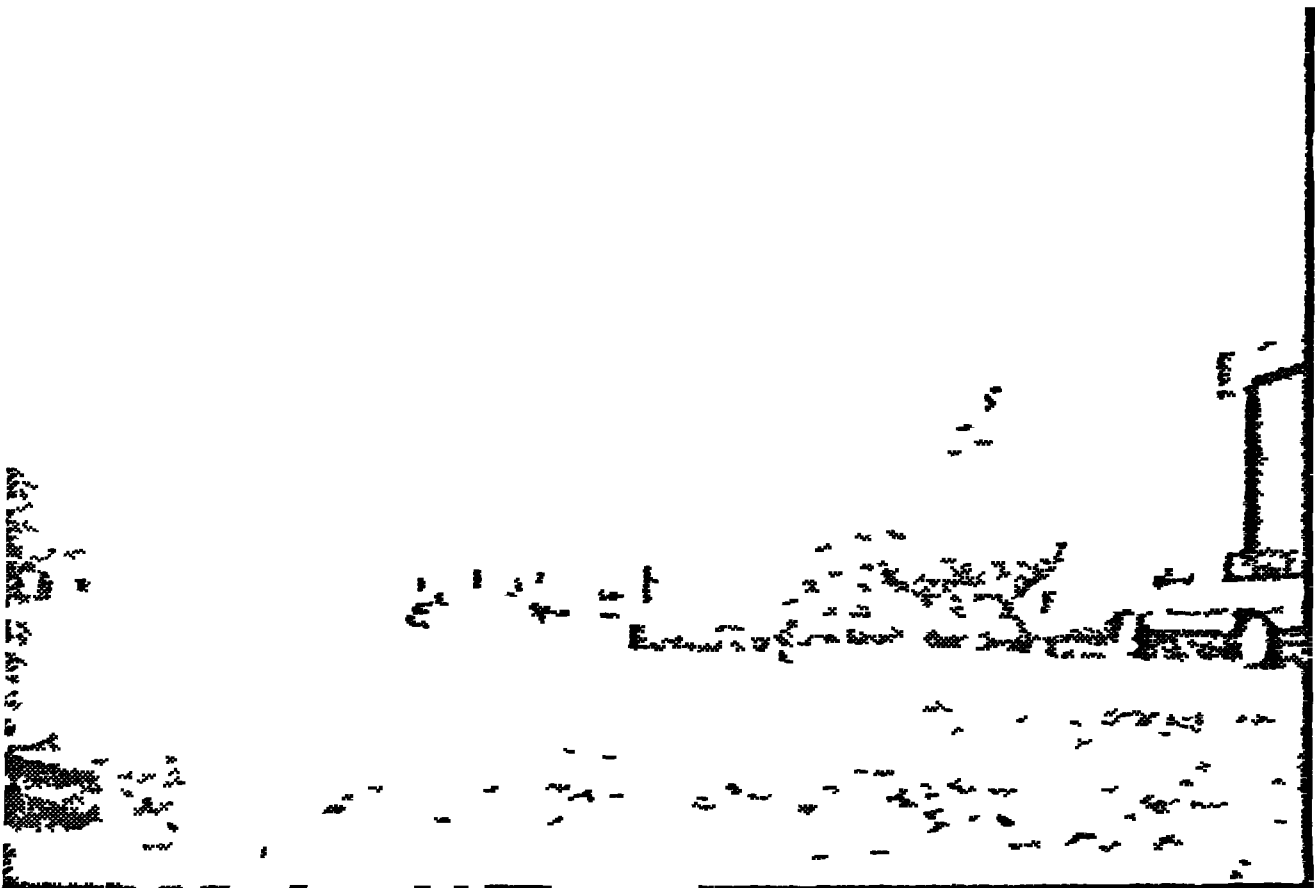


Rocky Flats Operable (RFO) Unit 1 (881 Hillside) Hydrochloric Acid Overflow Information

RFO HCL ACID OVERFLOW IN BUILDING 891 (12/31/92 version 2 0)

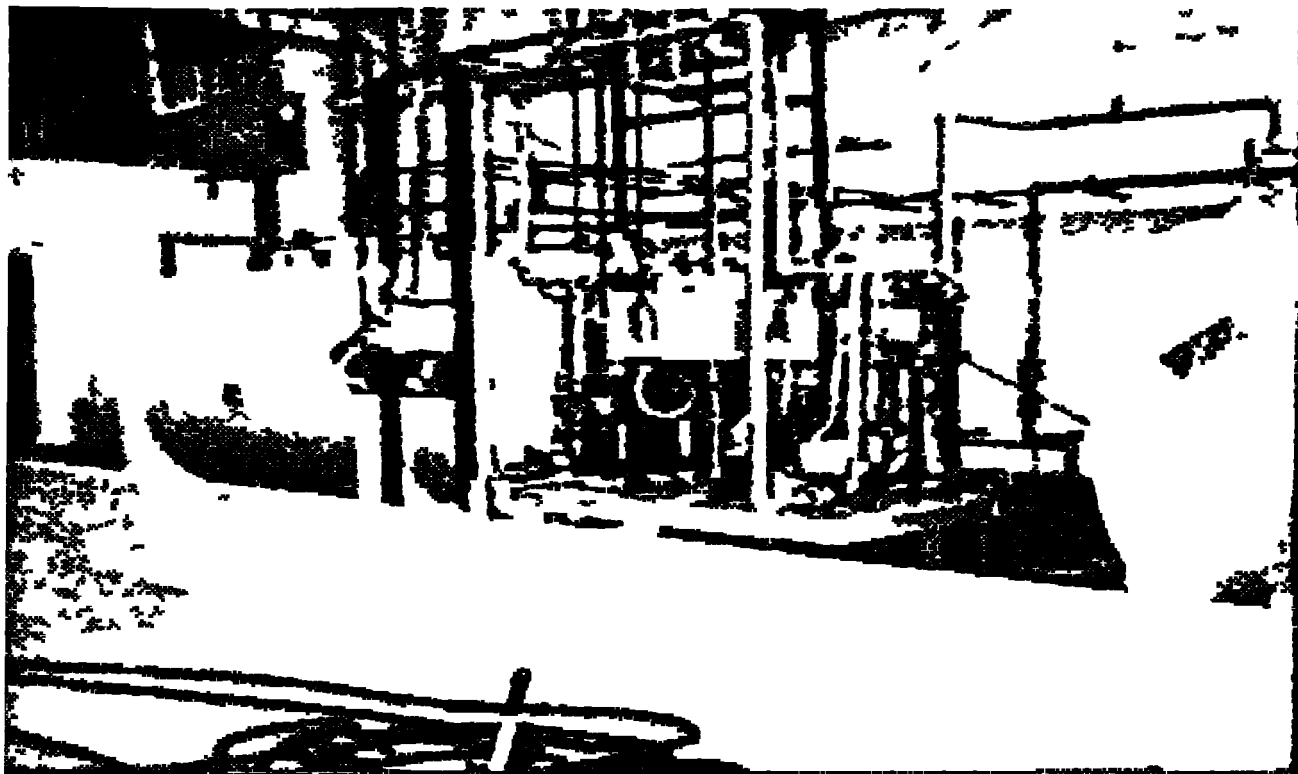
On Monday December 21 1992 in Building 891 at Rocky Flats approximately 2 000 gallons of 30 percent hydrochloric acid was released from an overflow pipe from a storage tank. The overflow was contained within the secondary containment berm for the tank. This occurred immediately after delivery of 1 000 gallons from an offsite vendor after the vendor blew (to clear) his delivery hose. The tank capacity was 2 500 gallons and already contained approximately 1 200 gallons. The RFO Fire Department and Hazmat Team responded at 1254 hours. By 0200 hours Tuesday December 22 all but about 50 gallons of acid was transferred from the containment berm into a neutralization tank (page 3). The residual 50 gallons of neutralized acid was transferred to barrels. **As shown on page 4 the cause of the overflow was attributed to the tank being constructed backward. On the left end of the tank where the overflow line was to have been connected a pipe ran from the connection down to the bottom of the tank (this was the design for the fill connection). When the vendor blew his delivery line it initiated the siphon effect in the tank causing the contents to be siphoned out of the tank into the containment berm. The tank was replumbed December 30 1992.**

Building 891(as shown below) is the groundwater treatment building for the Operable Unit 1 (881 Hillside) Interim Measure/Interim Remedial Action under the Environmental Restoration Program at RFO. The treatment system consists of a UV Peroxide unit for organics destruction and ion exchange units for uranium removal. The hydrochloric acid is used to regenerate the ion exchange units. Water treatment operations resumed at approximately 0800 Wednesday December 23 1992. The photo below shows the influent storage tanks (foreground) and the effluent storage tanks (background). Contact Scott Grace RFO Environmental Restoration Division 303 966 7199

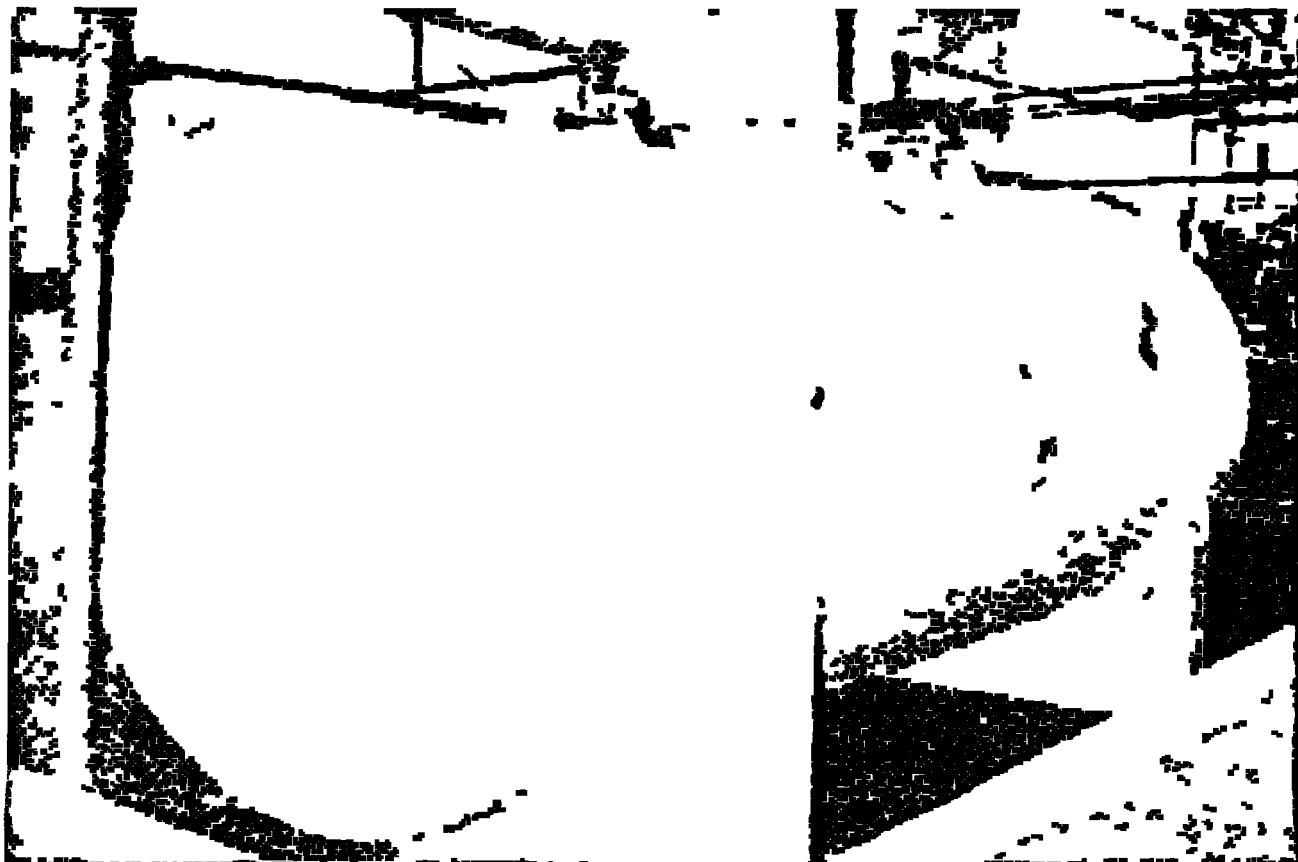


891 Building influent (foreground) and effluent tanks (background)

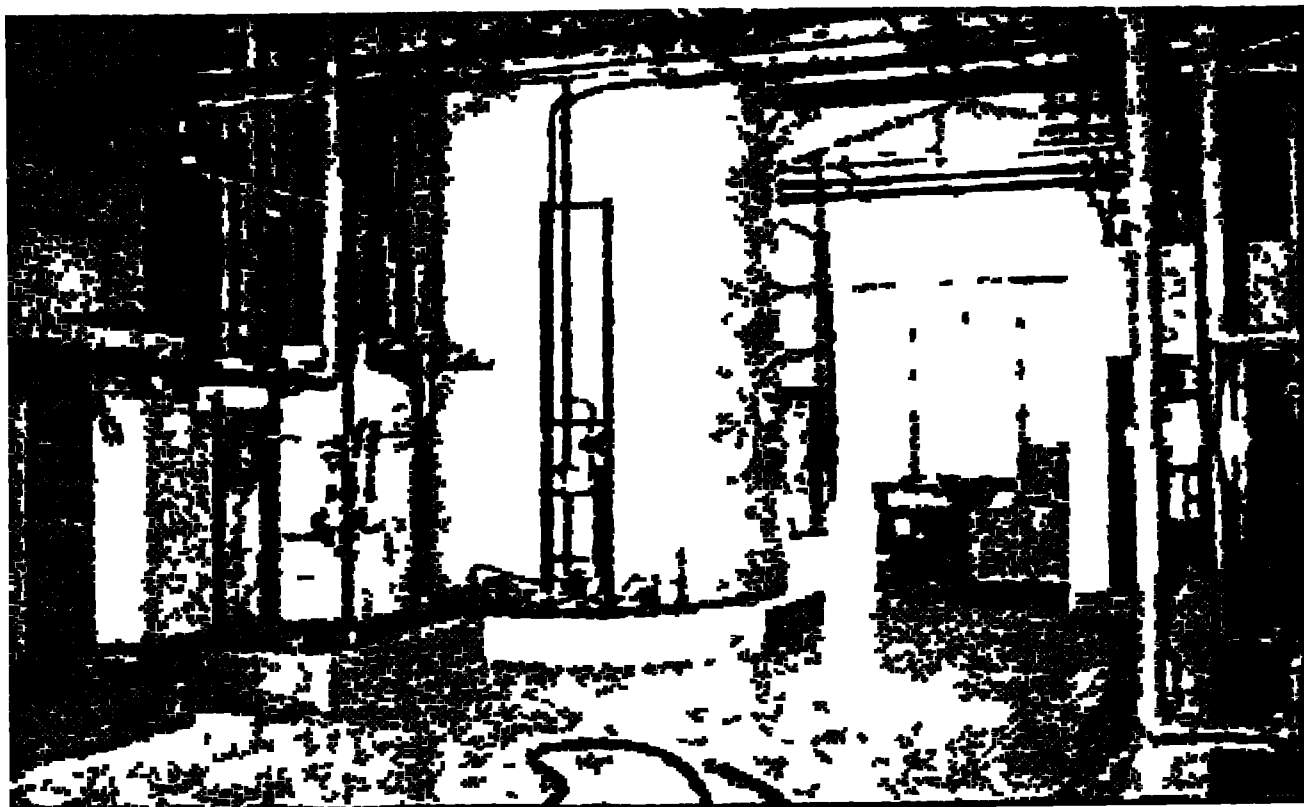
The photo below shows the HCL tank on the left inside building 891



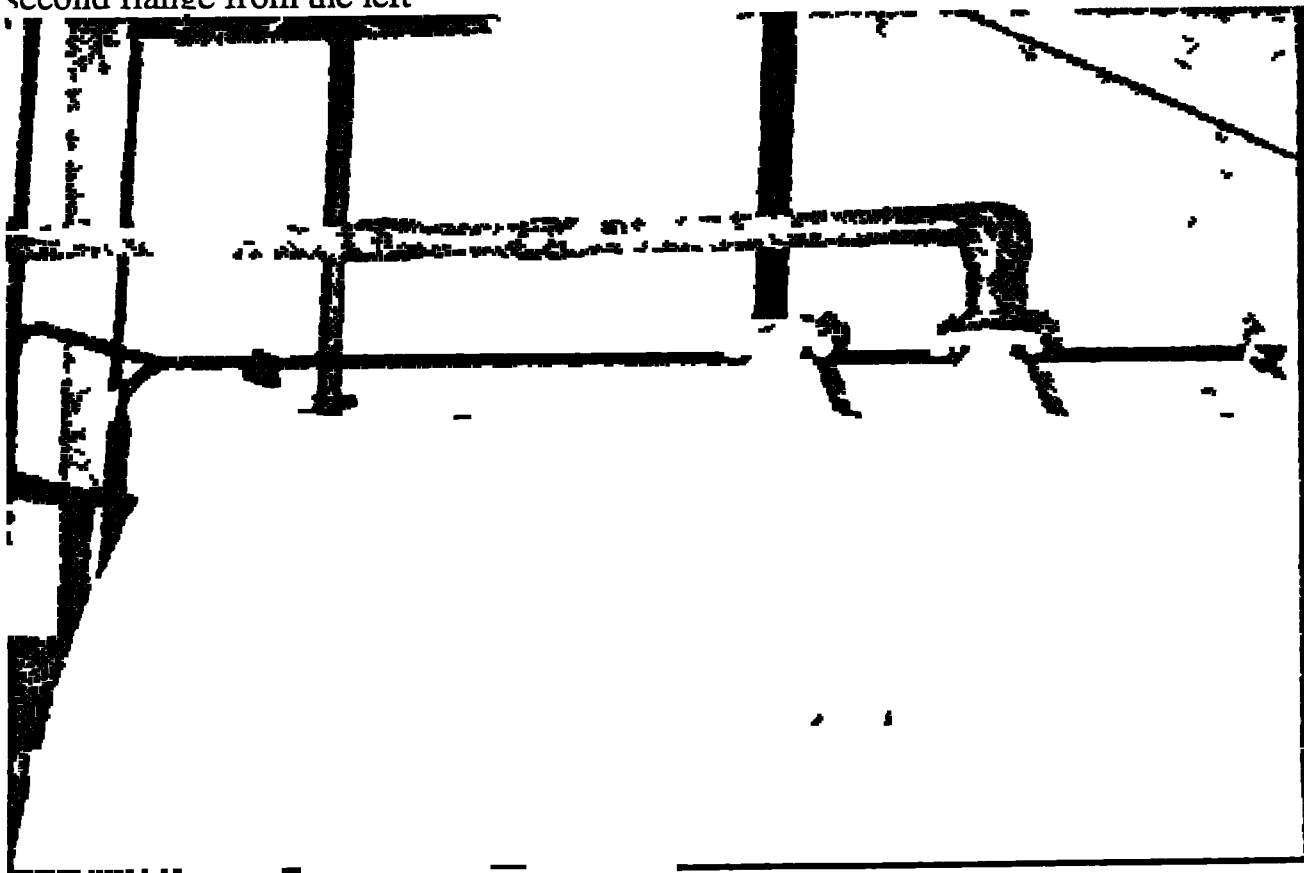
The photo below shows a close up of the HCL tank Note the overflow line to the left

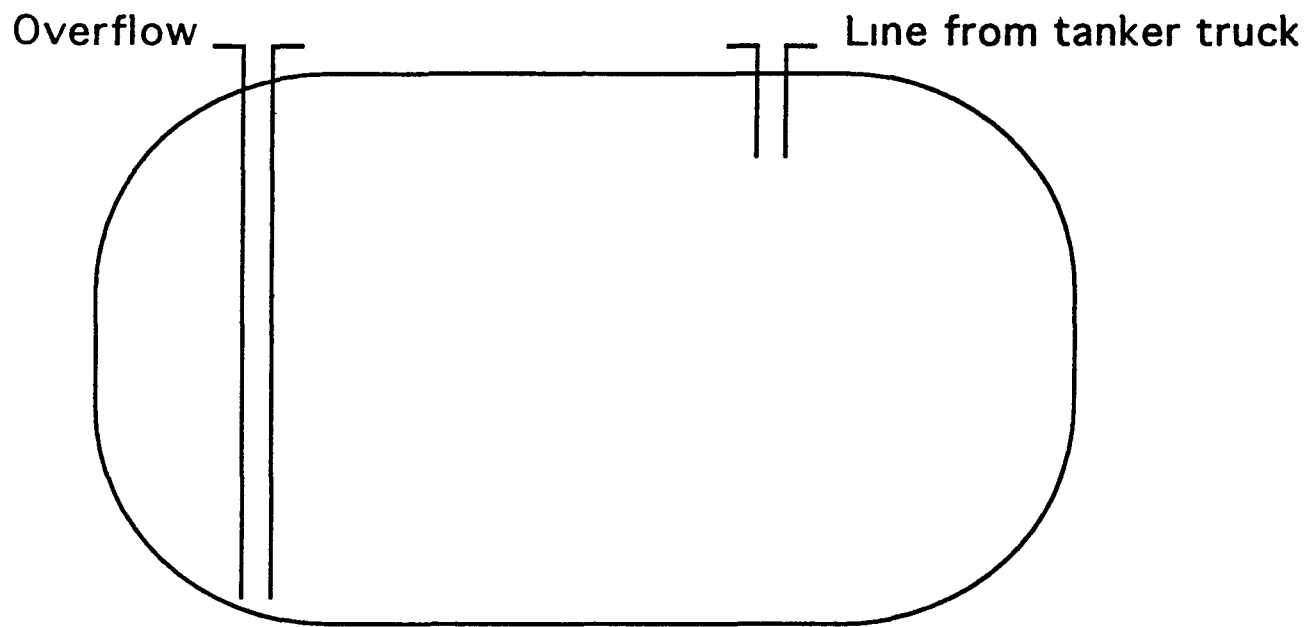


The HCL was pumped into this neutralization tank.

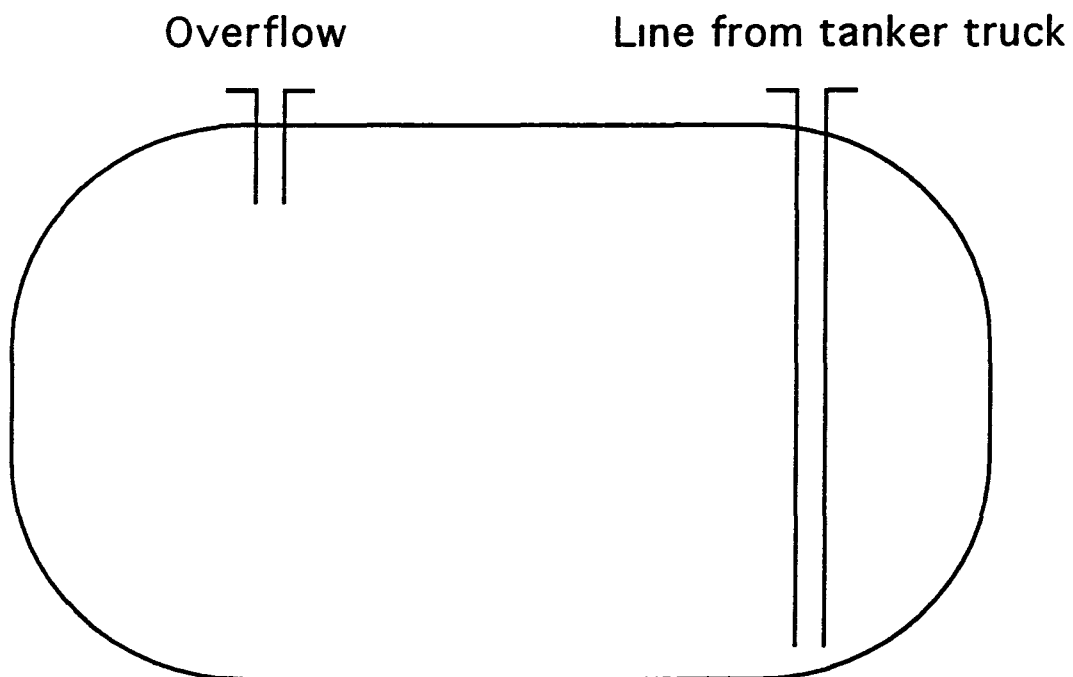


This photo shows how the overflow line was replumbed from the left flange to the second flange from the left





Tank 209 Piping Arrangement when the Spill Occured



Tank 209 Correct Piping Arrangement